

Appl. No. 10/725,782  
Amdt. dated July 1, 2005  
Reply to Office Action of April 1, 2005

**Amendments to the Drawings:**

The attached sheets are as follows:

Replacement sheet - FIGs. 15 and 16.

The replacement drawing is to correct an inadvertent omission of numeral "190" to delineate the entire structure of FIG. 15.

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### **REMARKS/ARGUMENTS**

Claims 6-15 and 17-20 are pending. Independent claims 6 and 13 have been amended. Claims 1-5 and 16 have been canceled. A replacement sheet including FIGs. 15 and 16 has been submitted to correct an inadvertent omission of numeral 190. The Specification has also been amended to correct informalities. No new subject matter has been added with amendment to the claims, the replacement sheet with amendment of the FIG. 15, or the amendments to the Specification.

#### **A. Objection to Drawings**

The drawings stand objected to for an advertent omission of numeral 190. The advertent omission has been corrected in the manner requested by the Examiner. Therefore, reconsideration and withdrawal of the objection to drawings are respectfully requested.

#### **B. Objection to the Specification**

The specification has been objected to for informalities. These informalities have been corrected as suggested by the Examiner. Therefore, reconsideration and withdrawal of the objection to specification are respectfully requested.

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C. 35 U.S.C. 102(b)

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 13-20 - Mitani

Claims 13-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated U.S. Patent No. 5,982,041 issued November 9, 1999 to Osamu Mitani, et al. (hereinafter “the Mitani patent”) (Office Action, pages 2-5).

Independent claim 13 (from which claims 14, 15, and 17-20 depend, with claim 16 having been canceled) has been amended to incorporate the limitations of claim 16, in specific, that exposing the substrate and the microelectronic die to radiation occurs simultaneously with the attaching of the microelectronic die back surface to said substrate active surface.

The Office Action admits, on page 4, that the Mitani patent teaches that the exposing of the substrate and the microelectronic die to UV radiation is carried out after the semiconductor chip has been placed on substrate 8. The currently amended claims require these to be done simultaneously. Thus, the identical invention is not shown in as complete detail as is contained in the claim, which is required for a Section 102 rejection. Therefore, reconsideration and

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withdrawal of the Section 102(b) rejection of claims 13-15 and 17-20 (claim 16 having been canceled) are respectfully requested.

Claims 1-3, 5-8, and 10 - Baba

Claims 1-3, 5-8, and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated U.S. Patent No. 6,582,993 issued June 24, 2003 to Shunji Baba, et al. (hereinafter "the Baba patent") (Office Action, pages 5-6).

Claim 1-3 and 5 have been canceled. Independent claim 6 (from which claims 7, 8, and 10 depend) has been amended to incorporate the limitations that the substrate and the microelectronic die are exposed to radiation to partially cure the radiation curable underfill material during disposition thereof, and heating the conductive bumps and the radiation curable underfill material to reflow the conductive bumps and to completely cure the radiation curable underfill material. Support for this limitation can be found in the Specification in paragraphs 40, 41, and 42.

The Baba patent neither teaches nor suggests such limitations. Therefore, reconsideration and withdrawal of the Section 102(b) rejection of claims 6-8 and 10 (claims 1-3 and 5 having been canceled) are respectfully requested.

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D. 35 U.S.C. § 103(a)

Section 103(a): M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 4 and 9 – Baba patent, Akram patent, and Swanson reference

Claims 4 and 9 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Baba patent in view of either U.S. Patent No. 6,214,635 issued April 10, 2001 to Salman Akram and James Wark (hereinafter “the Akram patent”) or the reference entitled “Case Histories of Light Curing Adhesives in Electronics Manufacturing” by Peter Swanson (hereinafter “the Swanson reference”) (Office Action, pages 6 and 7).

Again, as previously discussed, claim 4 has been canceled and independent claim 6 (from which claim 9 depends) has been amended to contain the limitation that the substrate and the microelectronic die are exposed to radiation to partially cure the radiation curable underfill material during disposition thereof, and heating said conductive bumps and said radiation

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curable underfill material to reflow said conductive bumps and to completely cure said radiation curable underfill material.

Neither the Baba patent, the Akram patent, nor the Swanson reference, either alone or in combination, teach or suggest such limitations. Therefore, reconsideration and withdrawal of the Section 103(a) rejection of claim 9 (claim 6 having been canceled) are respectfully requested.

Claims 11 and 12 – Baba patent and AAPA

Claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being obvious over the Baba patent as applied to claim 6 and further in view of Applicant's admitted prior art [0002]-[0008] with Figs. 22-23 (hereinafter "the AAPA") (Office Action, pages 7-8).

Again, as previously discussed, claim 4 has been canceled and independent claim 6 (from which claims 11 and 12 depend) has been amended to contain the limitation that the substrate and the microelectronic die are exposed to radiation to partially cure the radiation curable underfill material during disposition thereof, and heating said conductive bumps and said radiation curable underfill material to reflow said conductive bumps and to completely cure said radiation curable underfill material. .

Neither the Baba patent nor the AAPA, either alone or in combination, teach or suggest such limitations. Therefore, reconsideration and withdrawal of the Section 103(a) rejection of claims 11 and 12 are respectfully requested.

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In view of the foregoing remarks, the Applicants request allowance of the application.  
Please forward further communications to the address of record. If the Examiner needs to  
contact the below-signed attorney to further the prosecution of the application, the contact  
number is (208) 433-9217.

Respectfully submitted,

Dated: July 1, 2005

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